

Application No.: 09/913,833

Docket No.: 21499-00050-US

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A device for filling and reinforcing an internal tunnel in a tooth from which tooth approximal caries has been removed by means of a tunnel preparation ~~and for preventing overhangs~~, comprising:

a closed first elongate and flexible container means having one end provided with a tip or string to enable insertion of said first container means into an interdental space adjacent the portion of said tooth, from which approximal caries has been removed,

said first container means being pre-filled or fillable with a flowable restorative material, which is disposed to flow into and fill said tunnel preparation when a hole has been punched into said first container means.

2. (Currently amended) A device according to claim 1, wherein: A device for filling and reinforcing an internal tunnel in a tooth from which tooth approximal caries has been removed by means of a tunnel preparation and for preventing overhangs, comprising:

a closed first elongate and flexible container means having one end provided with a tip or string to enable insertion of said first container means into an interdental space adjacent the portion of said tooth, from which approximal caries has been removed, wherein

said closed first container means is pre-filled to about 60 to 80 % of its volume with a flowable restorative which is disposed to flow into and fill said tunnel preparation when a hole has been punched into said first container means.

3. (Currently amended) A device according to claim 2, wherein: A device for filling and reinforcing an internal tunnel in a tooth from which tooth approximal caries has been removed by means of a tunnel preparation, comprising:

a closed first elongate and flexible container means having one end provided with a string to enable insertion of said first container means into an interdental space adjacent the portion of said tooth, from which approximal caries has been removed; and

a second closed and flexible container means is attached or attachable to the device;

Application No.: 09/913,833

Docket No.: 21499-00050-US

said first container means being prefilled with a flowable restorative material, which is disposed to flow into and fill said tunnel preparation when a hole has been punched into said first container means.

4. (Currently amended) A device according to claim 3, wherein:

the second container means is attached or attachable to the tip or to the string of the first flexible container means.

5. (Previously presented) A device according to claim 4, wherein:

the second container means is attachable to the string of the first container means by means of a ring or a string mounted to one end of said second container means, when said first container means has been pulled into an interdental space adjacent a tooth from which approximal caries has been removed.

6. (Previously presented) A device according to claim 3, wherein:

the second container means is prefilled to a predetermined thickness and resiliency with a medium comprising at least one of, a gas or a gel in order to seal a proximal tunnel opening when said second container means has been drawn into said interdental space on removing the first container means from said interdental space after said tunnel preparation has been filled.

7. (Previously presented) A device according to claim 6, wherein:

said medium is a photoluminescing medium enabling photocuring of the dental restorative resin filled into the tunnel preparation by irradiation with visible light.

8. (Previously presented) A device according to claim 6, wherein:

the second container means is provided with an axially extending, flexible and laterally lighting fiber optic, wherein the fiber optic is arranged to cure by means of lasers, plasma arc or halogen light, a dental restorative resin filled into a tunnel preparation from said first container means.

Application No.: 09/913,833

Docket No.: 21499-00050-US

9. (Previously presented) A device according to claim 6, wherein:

said second container means includes a triboluminiscence system comprising luciferin and a luciferase capsule, wherein the triboluminiscence system provides chemiluminescence when said container means is squeezed or bent breaking said luciferase capsule and bringing luciferin and luciferase into contact with each other.

10. (Previously presented) A device according to claim 6, wherein:

said second container includes a combination of chemiluminescence and a fiber optic.

11. (Previously presented) A device according to claim 1, wherein:

the first flexible container means is made of photoblocking nylon.

12. (Previously presented) A device according to claim 3, wherein:

the first and the second flexible container means are made of transparent nylon or analogue transparent material.

13. (Previously presented) A device according to claim 3, wherein:

the first flexible container means is substantially cylindrical and the second flexible container means is cylindrical or slightly conical, widening against the end facing away from the first container means.

14. (Previously presented) A device according to claim 3, wherein:

both flexible container means are provided with a triangular cross section and having one edge provided with a longitudinal outstanding fin.

15. (Previously presented) A device according to claim 14, wherein:

the ends of the container means are squeeze welded to form end fins parallel to the longitudinal fin of said container means, one end fin of each container means being common to both container means.

Application No.: 09/913,833

Docket No.: 21499-00050-US

16. (Previously presented) A device according to claim 15, wherein:

the device comprises a number of sequential container means, connected to each other by common end fins, the end fin in the front end of said device being provided with a string to facilitate insertion of said device into an interdental space, and

the longitudinal fin being provided with indications of the purpose of each container means, which container means are intended to be pulled step by step into the interdental space.

Cancel claims 17-22.

23. (New) A device for filling and reinforcing an internal tunnel in a tooth from which tooth approximal caries has been removed, comprising:

a closed first elongate and flexible container having means for inserting the first container into an interdental space between two adjacent teeth,

said first container means being prefilled with a flowable restorative material which is disposed to flow into and fill a tunnel preparation when a hole has been punched into said first container means.

24. (New) A device according to claim 23, comprising:

a second closed and flexible container connected to the means for enabling insertion.

25. (New) A device according to claim 23, wherein:

the first flexible container means is made of photoblocking nylon.

26. (New) A device according to claim 23, wherein:

the second container means is prefilled to a predetermined thickness and resiliency with a medium comprising at least one of a gas or a gel.

27. (New) A device according to claim 23, wherein:

said medium is a photoluminiscencing medium enabling photocuring of the dental restorative resin filled into the tunnel preparation by irradiation with visible light.

Application No.: 09/913,833

Docket No.: 21499-00050-US

28. (New) A device according to claim 24, wherein:

the second container means is provided with an axially extending, flexible and laterally lighting fiber optic, wherein the fiber optic is arranged to cure by means of lasers, plasma arc or halogen light, a dental restorative resin filled into a tunnel preparation from said first container means.

29. (New) A device according to claim 24, wherein:

said second container means includes a triboluminiscence system comprising luciferin and a luciferase capsule, wherein the triboluminiscence system provides chemiluminescence when said container means is squeezed or bent breaking said luciferase capsule and bringing luciferin and luciferase into contact with each other.

30. (New) A device according to claim 24, wherein:

said second container includes a combination of chemiluminescence and a fiber optic.

31. (New) A device according to claim 23, wherein:

the first flexible container means is made of photoblocking nylon.

32. (New) A device according to claim 24, wherein:

the first and the second flexible container means are made of transparent nylon or analogue transparent material.

33. (New) A device according to claim 24, wherein:

the first flexible container means is substantially cylindrical and the second flexible container means is cylindrical or slightly conical, widening against the end facing away from the first container means.

Application No.: 09/913,833

Docket No.: 21499-00050-US

34. (New) A device according to claim 24, wherein:

both flexible container means are provided with a triangular cross section and having one edge provided with a longitudinal outstanding fin.

35. (New) A device according to claim 34, wherein:

the ends of the container means are squeeze welded to form end fins parallel to the longitudinal fin of said container means, one end fin of each container means being common to both container means.

36. (New) A device according to claim 35, wherein:

the device comprises a number of sequential container means, connected to each other by common end fins, the end fin in the front end of said device being provided with a string to facilitate insertion of said device into an interdental space, and

the longitudinal fin being provided with indications of the purpose of each container means, which container means are intended to be pulled step by step into the interdental space.